

WHAT IS CLAIMED IS:

1. A defect inspection system comprising:
 - image acquiring means for acquiring a two-dimensional image of a subject which is a processing
 - 5 target in a manufacturing process;
 - defect extracting means for extracting a defect by a defect extraction algorithm using a predetermined parameter for an image acquired by said image acquiring means;
 - 10 displaying means for displaying an image of the defect of the subject extracted by said defect extracting means;
 - parameter adjusting means for adjusting the parameter in accordance with a defect extraction degree
 - 15 for the subject; and
 - quality judging means for judging the quality of the subject based on a defect information extracted by said defect extracting means.
2. The defect inspection system according to
- 20 claim 1, wherein said quality judging means has a function of checking the defect information extracted by said defect extracting means with defect data registered in a defect dictionary to determine a type of said defect, and a function of registering a new
- 25 defect data in the defect dictionary.
3. The defect inspection system according to claim 1, wherein the parameter adjusting means includes

slide switches which are displayed on a screen of said displaying means and adjust a parameter, and said slide switches and an image of the subject are simultaneously displayed on said screen of said displaying means.

5 4. The defect inspection system according to claim 1, wherein said defect extracting means has a function of automatically setting a parameter to judge a subject whose defect is known in advance.

10 5. The defect inspection system according to claim 1, wherein said quality judging means judges the quality for an image of the subject acquired by executing defect extraction by said defect extracting means by using a parameter set by the parameter adjusting means.

15 6. The defect inspection system according to claim 1, wherein said displaying means has a function of minimizing images of a plurality of subjects extracted by said defect extracting means and displaying them in a list.

20 7. The defect inspection system according to claim 6, wherein said displaying means displays thumbnail images obtained by minimizing said images in a list.

25 8. The defect inspection system according to claim 7, wherein said displaying means displays said thumbnail images in accordance with each lot of a cassette for accommodating the subject.

9. The defect inspection system according to claim 1, wherein said displaying means displays an image of a subject determined to be defective by said quality judging means in an area different from an area
5 for displaying images of a plurality of subjects extracted by said defect extracting means.

10. The defect inspection system according to claim 1, wherein said displaying means displays a defect extracted by said defect extracting means in
10 such a manner the defect overlaps on an image of the subject.

11. The defect inspection system according to claim 1, wherein said displaying means displays a result of the quality judgment by said quality judging
15 means in colors or characters for each image.

12. The defect inspection system according to claim 1, wherein said displaying means displays the defects by distinguishing them by using different colors in accordance with each type.

20 13. The defect inspection system according to claim 1, wherein said displaying means changes a color of a defect extracted by using a parameter changed by the parameter adjusting means and displays it.

25 14. The defect inspection system according to claim 1, wherein said predetermined parameter is prepared in accordance with a type of a defect, an inspection condition or an inspection method.

15. The defect inspection system according to claim 1, wherein the parameter adjusting means can set a lower limit value and an upper limit value for said predetermined parameter, and said defect extracting
5 means extracts image data exceeding said upper limit value among image data exceeding said lower limit value.

16. The defect inspection system according to claim 1, wherein said defect extracting means has a
10 function of registering a defect designated by said displaying means.

17. The defect inspection system according to claim 1, wherein said displaying means has a function of displaying an image of the subject based on a
15 parameter changed by the parameter adjusting means.

18. The defect inspection system according to claim 1, wherein said displaying means has a list box which displays defect types and, when any one of defect types shown in said list box is designated, said
20 displaying means displays a defect corresponding to the designated type.

19. The defect inspection system according to claim 1, wherein said displaying means redisplay an image before changing a parameter by the parameter
25 adjusting means, when a predetermined operation is carried out.

20. The defect inspection system according to

claim 1, wherein said displaying means changes and displays a color of a frame of an image of a subject determined to be defective by said quality judging means.